



MaineDOT
The Regional River Crossing

Linking Kittery, Maine & Portsmouth, New Hampshire



in cooperation with the

State of
New Hampshire



U.S. Department of Transportation
Federal Highway
Administration

Planning Board Meeting
Kittery, Maine

September 25, 2014

Jeff Folsom, Project Manager

Design Team

Bridge Design

FIGG | Hardesty & Hanover
Joint Venture

Roadway Design

SEBAGO
TECHNICS

Geotechnical, Hydraulics





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BRIDGE REPLACEMENT PROJECT

Site Plan - Looking Southeast

Memorial Bridge

Existing Sarah Mildred Long Bridge

Portsmouth, New Hampshire

Piscataqua River

Kittery, Maine

I-95 Bridge





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Current Alignment





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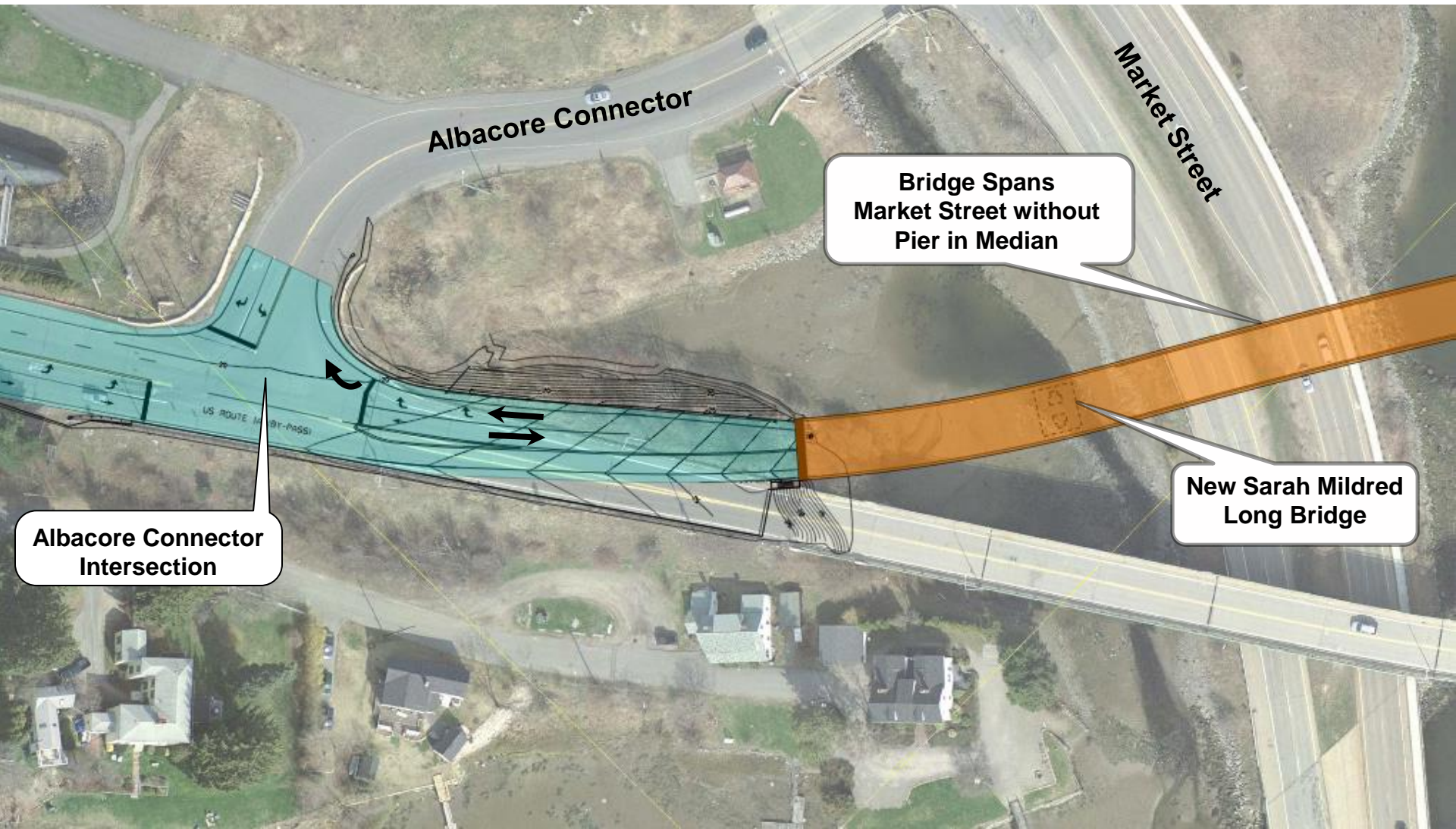
Selected Alignment





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Portsmouth Connection



Albacore Connector

Market Street

**Bridge Spans
Market Street without
Pier in Median**

**Albacore Connector
Intersection**

**New Sarah Mildred
Long Bridge**



View of Existing Bridge Over Market Street



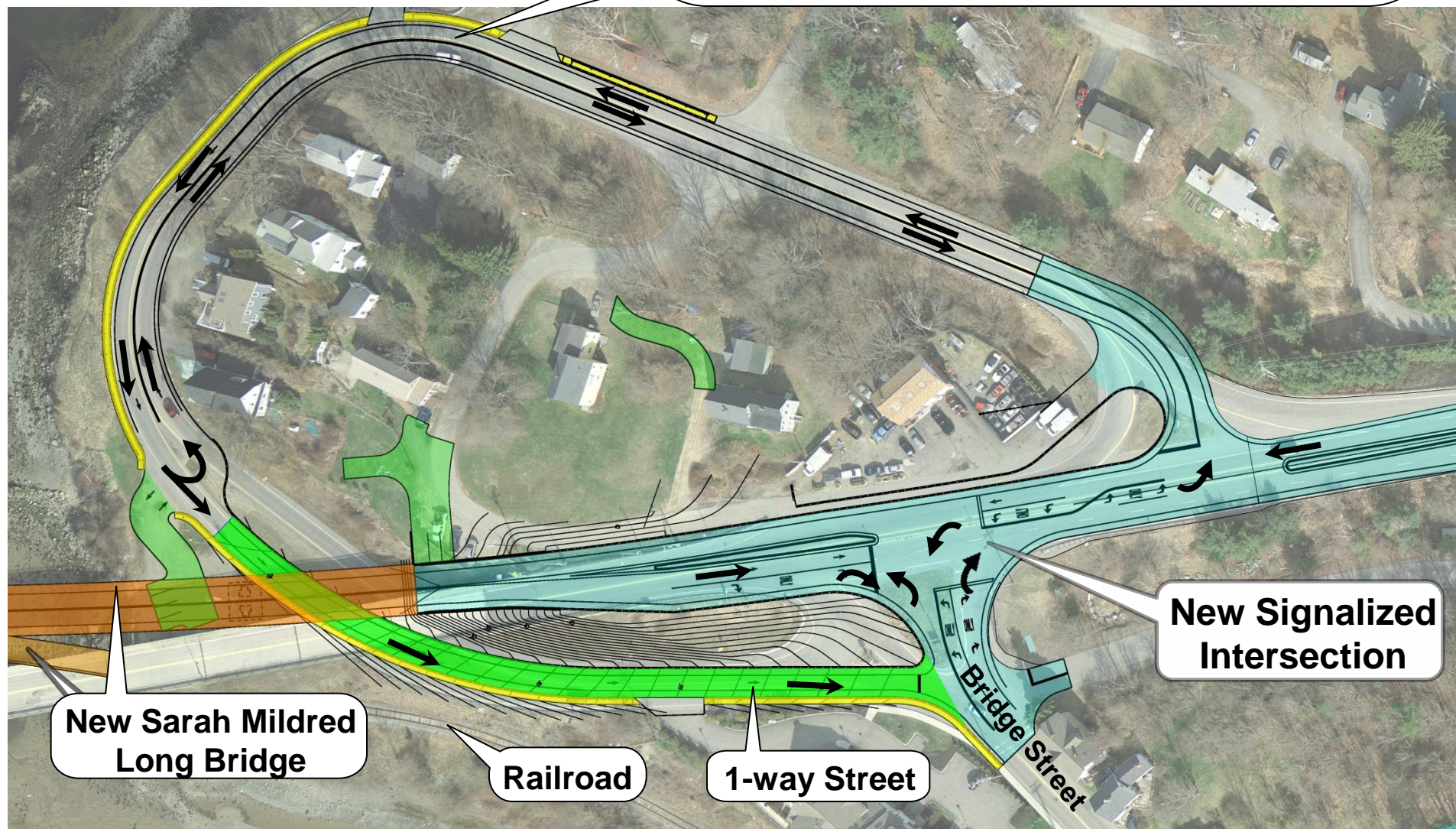
Rendering of New Bridge Spanning Over Market Street



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Kittery Connection – Signalized Intersection and 1-Way Oak Terrace

Improved Pedestrian Connection
with Sidewalks for Oak Terrace Community



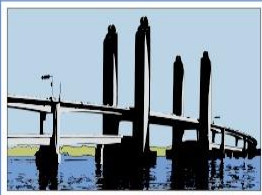
New Sarah Mildred
Long Bridge

Railroad

1-way Street

New Signalized
Intersection

Bridge Street



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Kittery Connection – Signalized Intersection and 1-Way Oak Terrace

BENEFITS of Proposed Design

Retains same Primary Traffic Movements.

Maintains Important Emergency Vehicle Access.

No Bridge Street Dead End.

Least Utility Relocation Impacts.

Create Park Setting under Bridge.

Improved Safety for Pedestrian Access from Oak Terrace to Downtown Kittery.

Addresses Adjacent Property Owner Considerations.

Less Through-Traffic, Improves quiet Neighborhood setting.

Minimal Retaining Walls.

Best Overall Costs.



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Navigation Span Existing Clearance



Horizontal clearance is the clear and **unobstructed** navigational portion of the Piscataqua River that provides safe passage

Horizontal clearance is measured perpendicular to the channel



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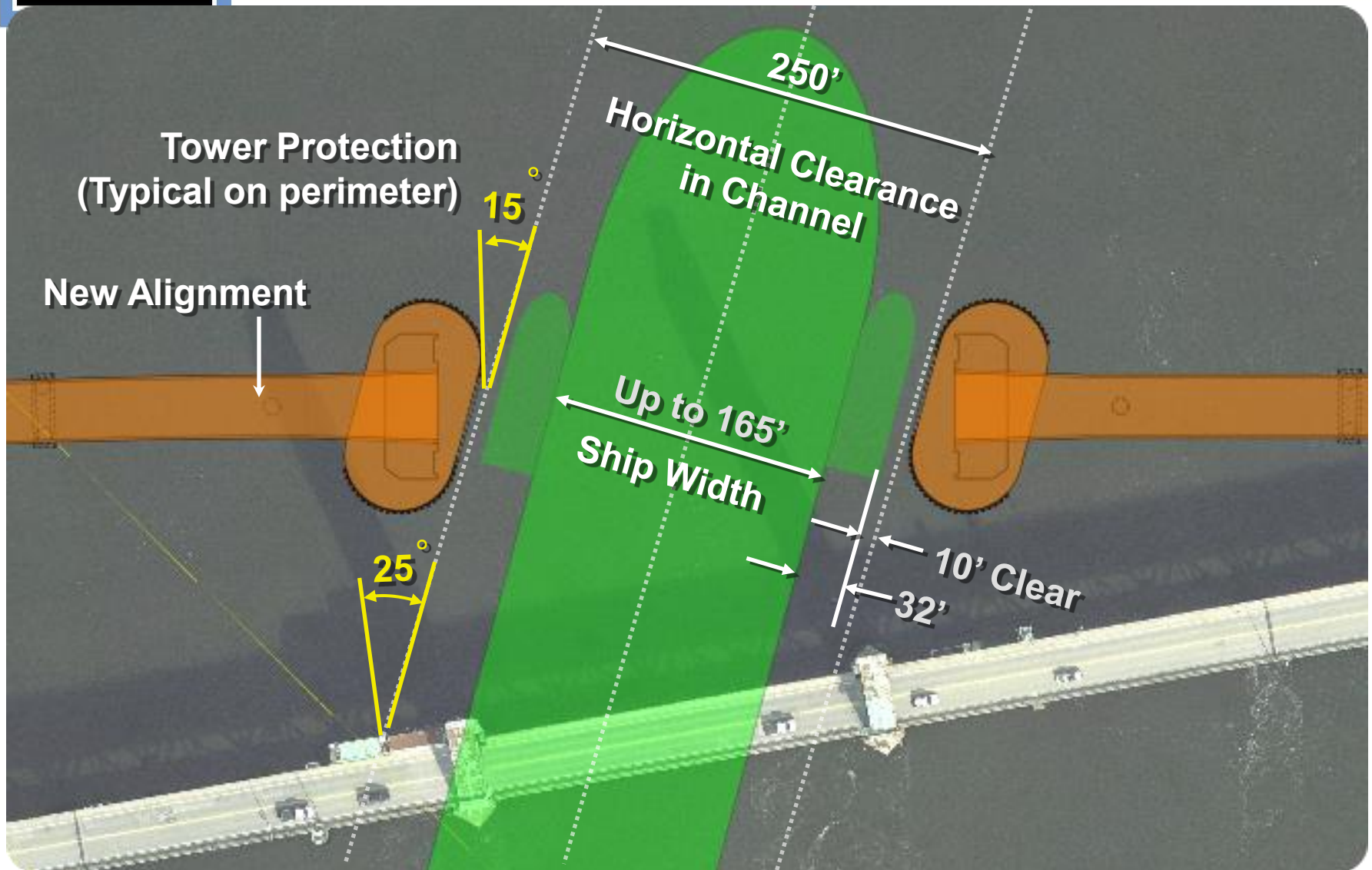
Key Project Challenges

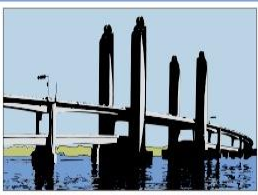




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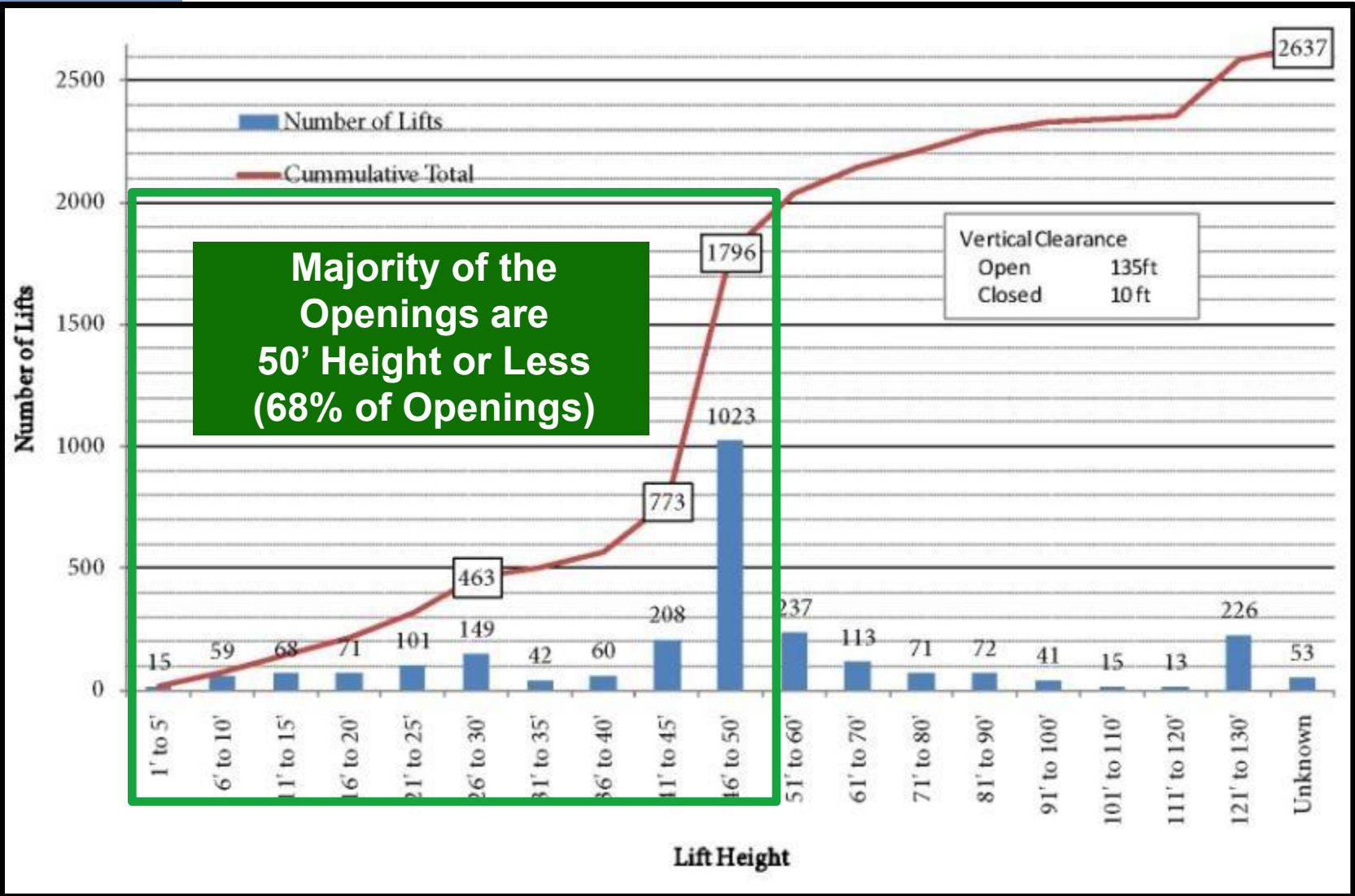
New Bridge Proposed Clearance





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Reduce Number of Bridge Openings





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Proposed Typical Clearances

Generic Lift Tower Shape

Roadway
Superstructure

Lift Span in normal position

Railroad
Superstructure

56'

Lift Span in typical configuration



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Proposed Typical Clearances

Generic Lift Tower Shape

Lift Span in highest position

Roadway
Superstructure

135'

Railroad
Superstructure

Lift Span in highest configuration
for tall vessels to pass under



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Proposed Typical Clearances

Generic Lift Tower Shape

Roadway
Superstructure

Lift Span in railroad position

Railroad
Superstructure

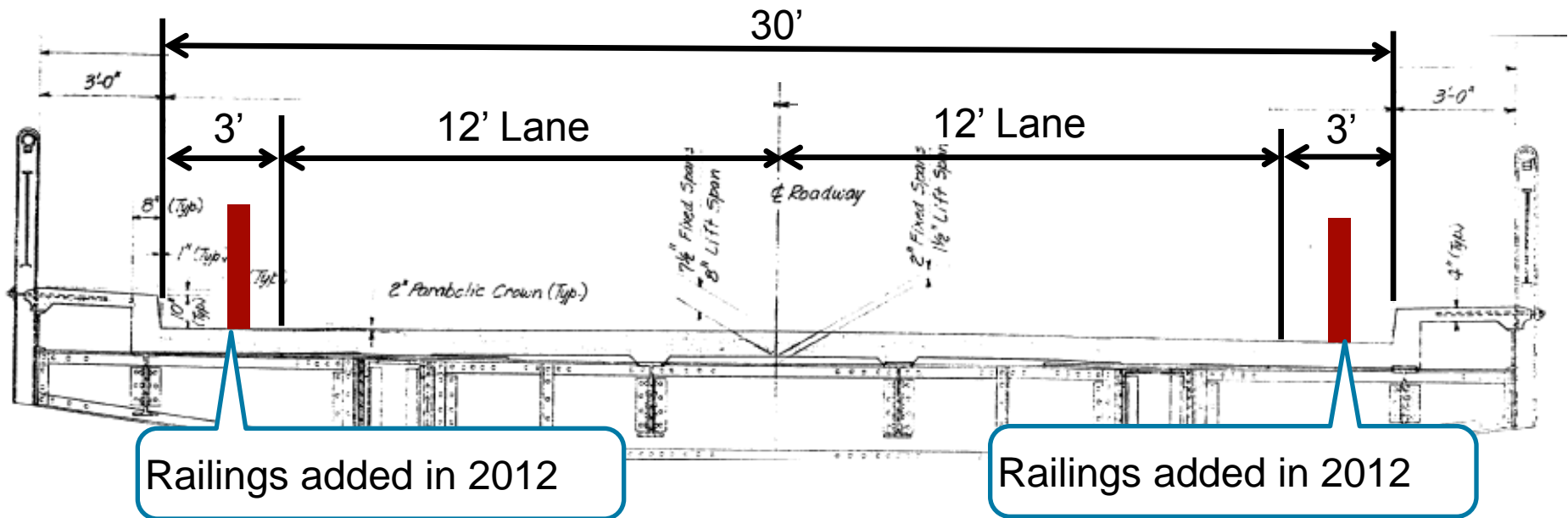
16'

Lift Span lowered
to railroad crossing configuration



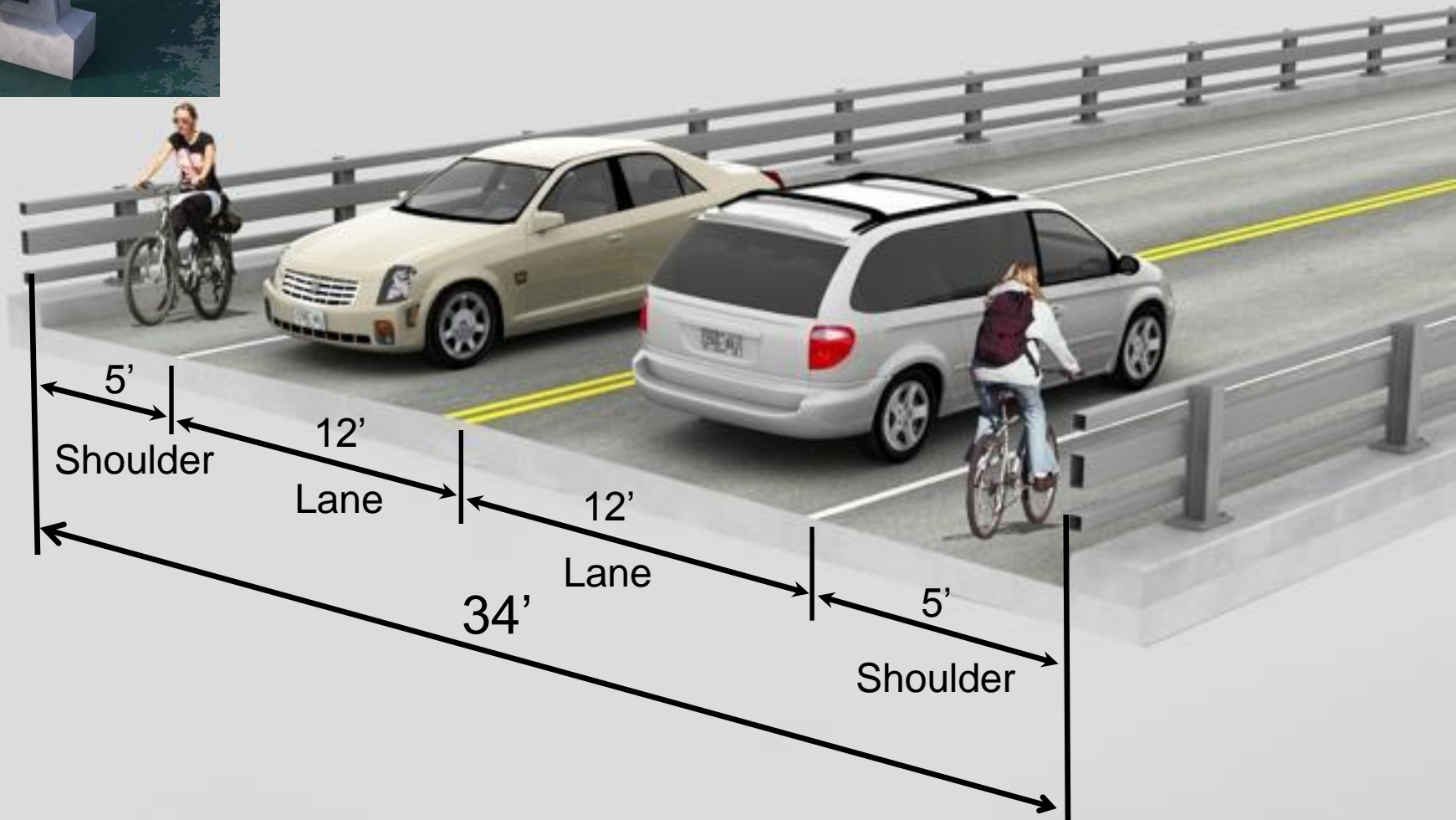
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Existing Cross-Section



Proposed Cross-Section

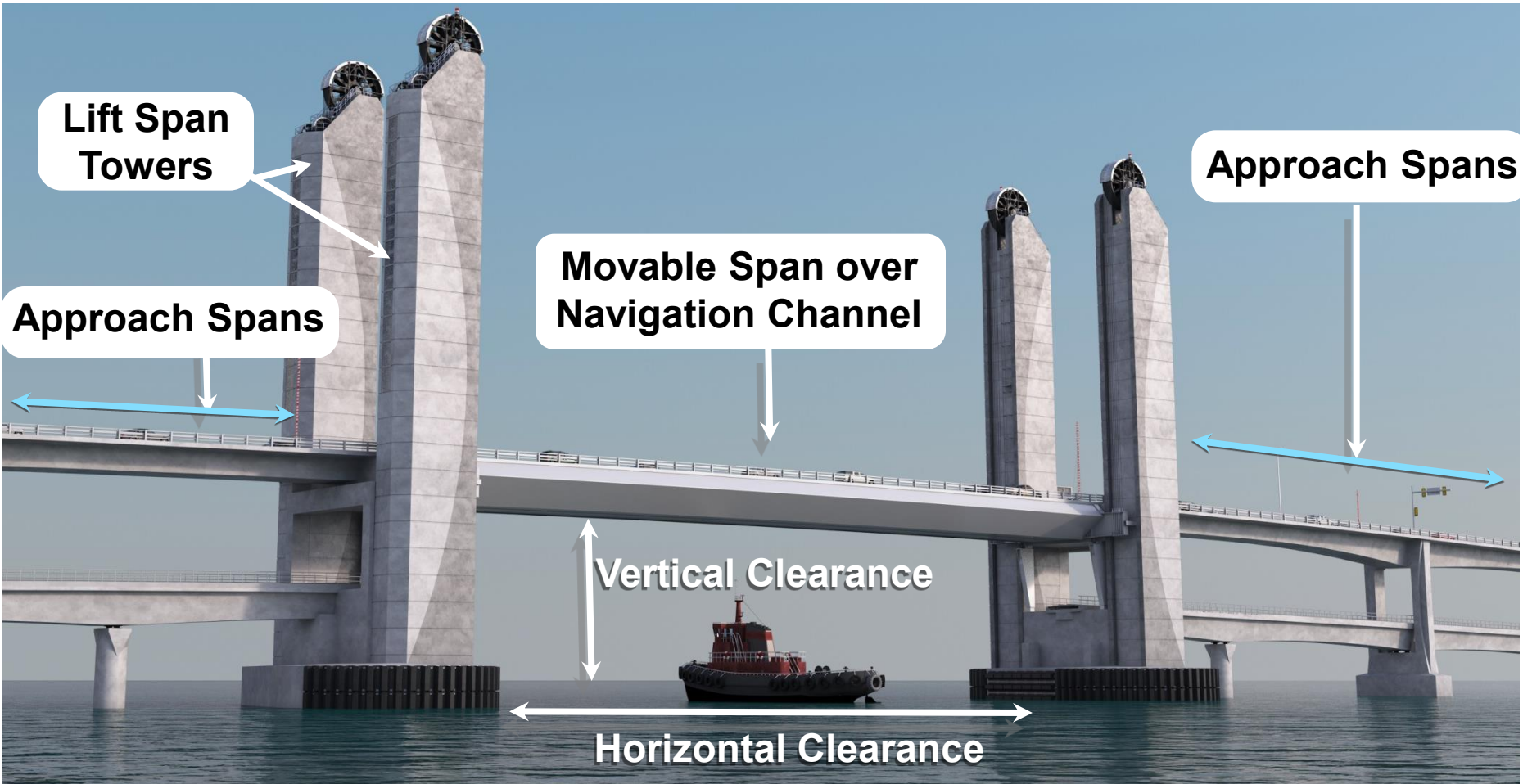
Vehicle traffic is on bridge above the train





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Bridge Configuration

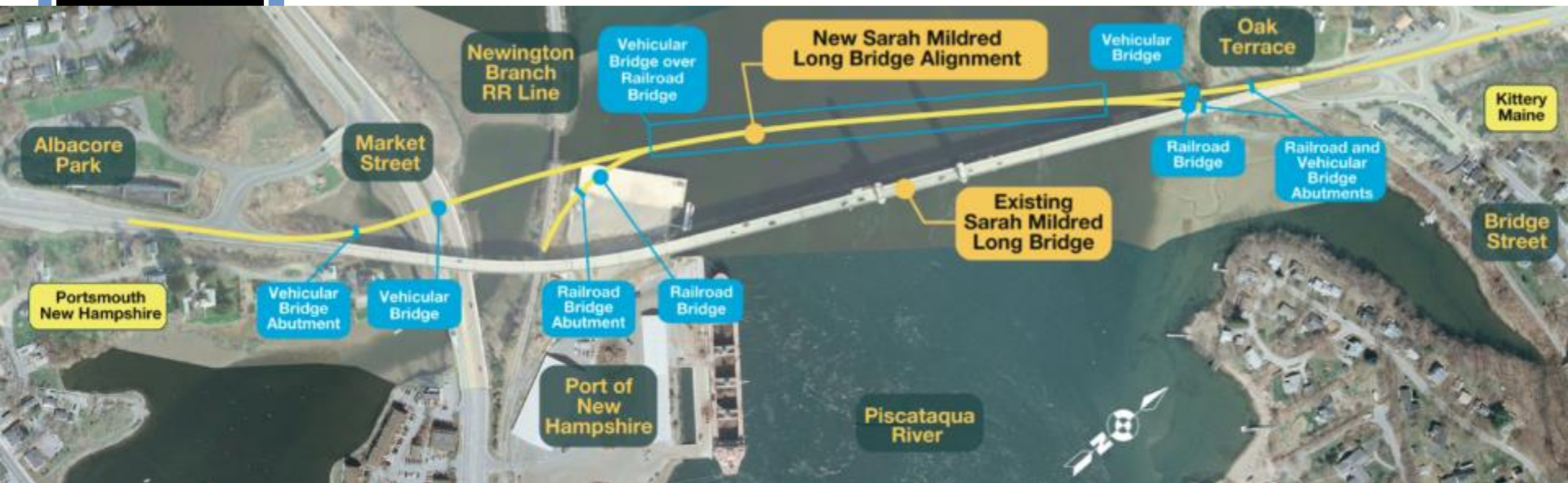


Schematic Illustration



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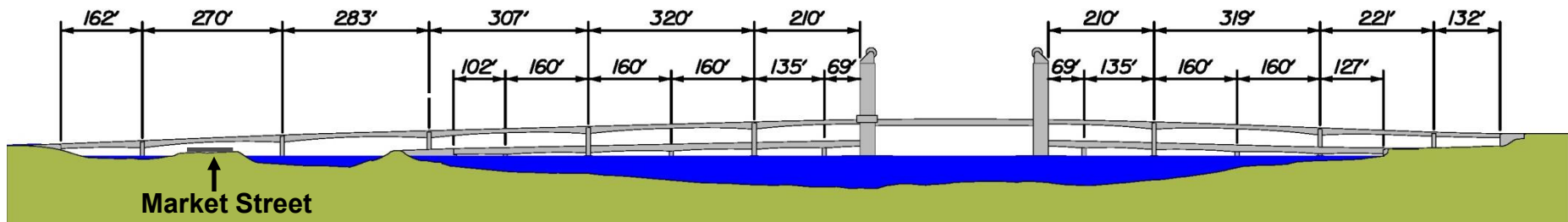
Proposed Span Arrangement



Portsmouth

Proposed Bridge

Kittery

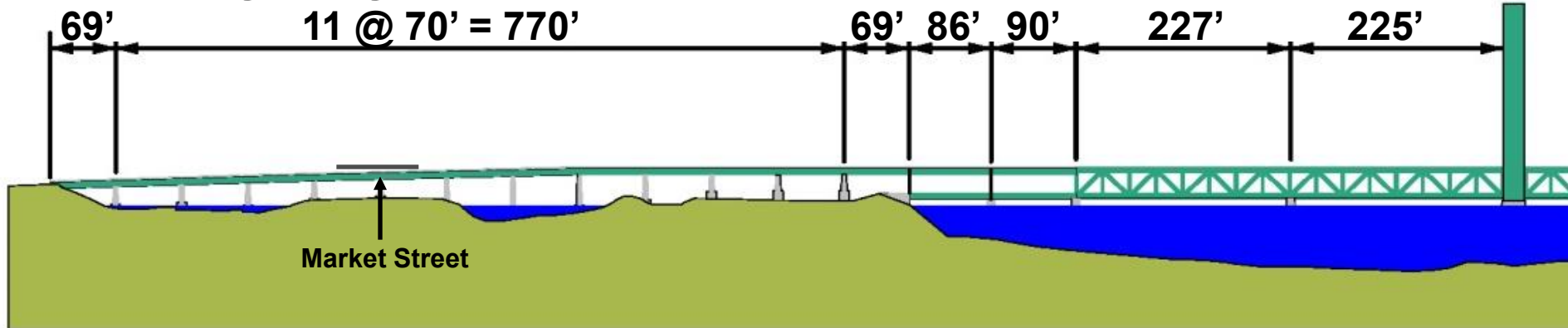


2,432' Vehicular Approach Bridge
1,435' Railroad Approach Bridge Underneath
300' Movable Span



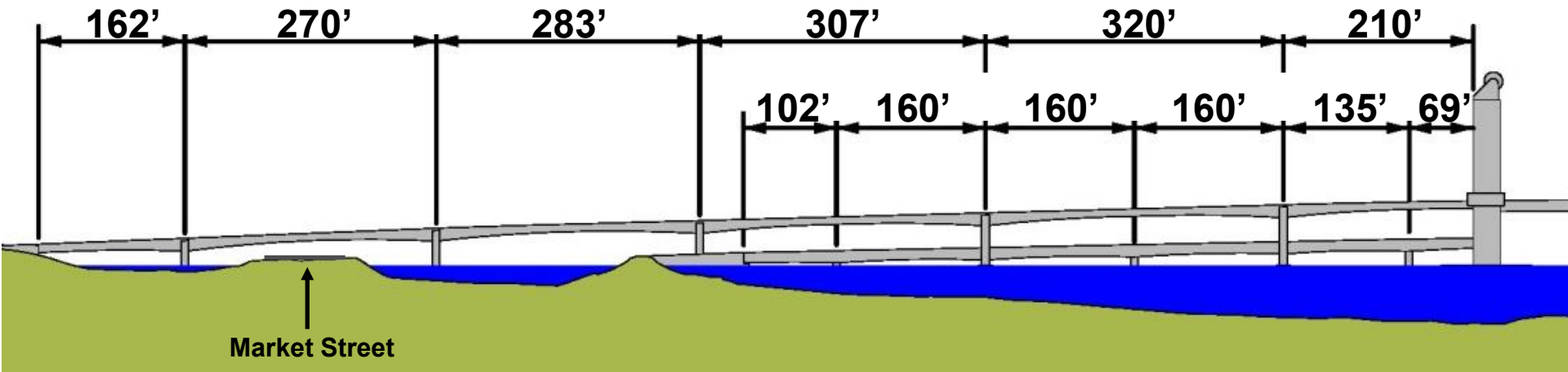
Portsmouth Side - Span Arrangement Comparison

Existing Bridge



Proposed Bridge – has 8 fewer Piers

5 Vehicular Piers
3 Railroad Piers
8 Total Piers



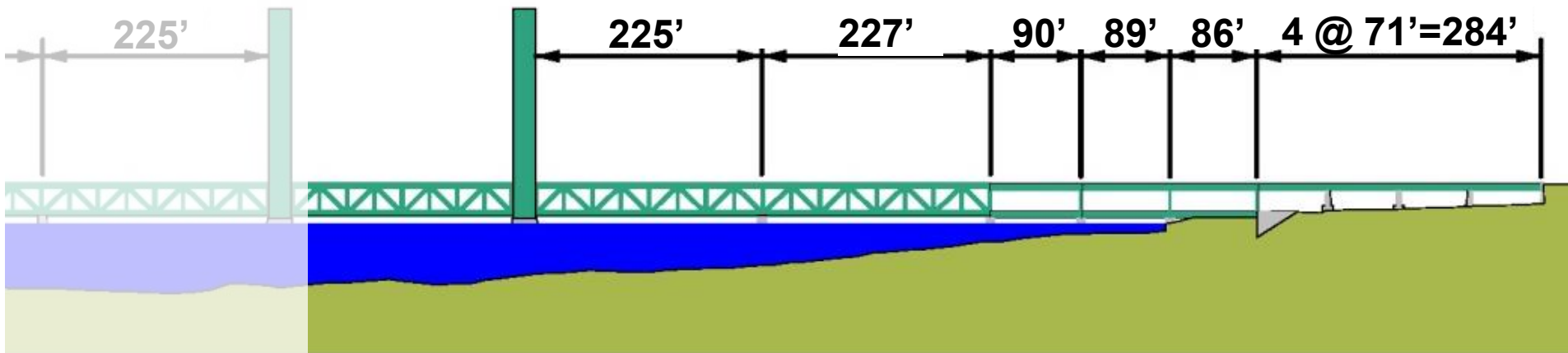


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Kittery Side - Span Arrangement Comparison

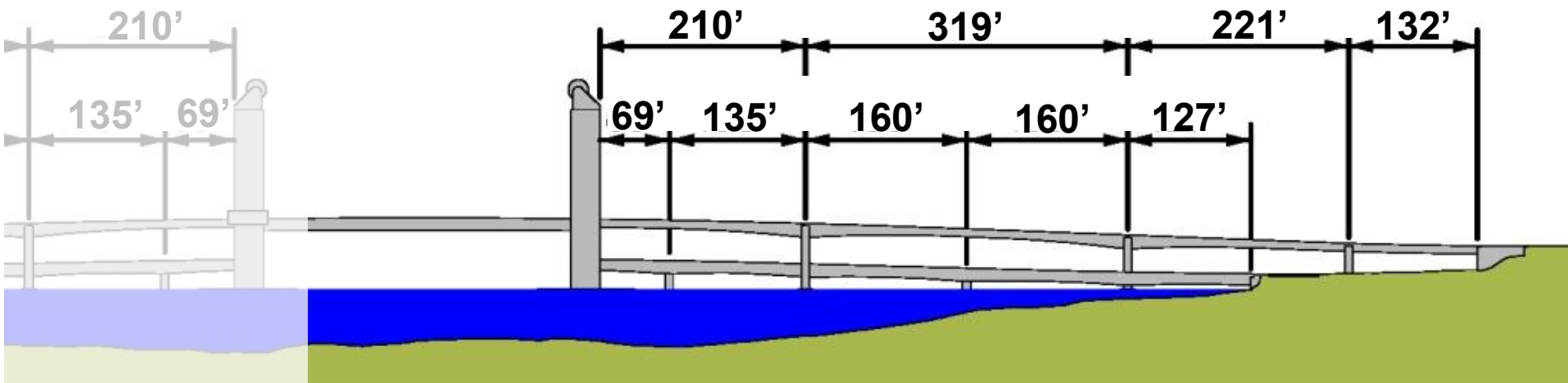
Existing Bridge

8 Total Piers



Proposed Bridge – has 3 fewer Piers

3 Vehicular Piers
2 Railroad Piers
5 Total Piers



Approach Bridge Superstructure Type

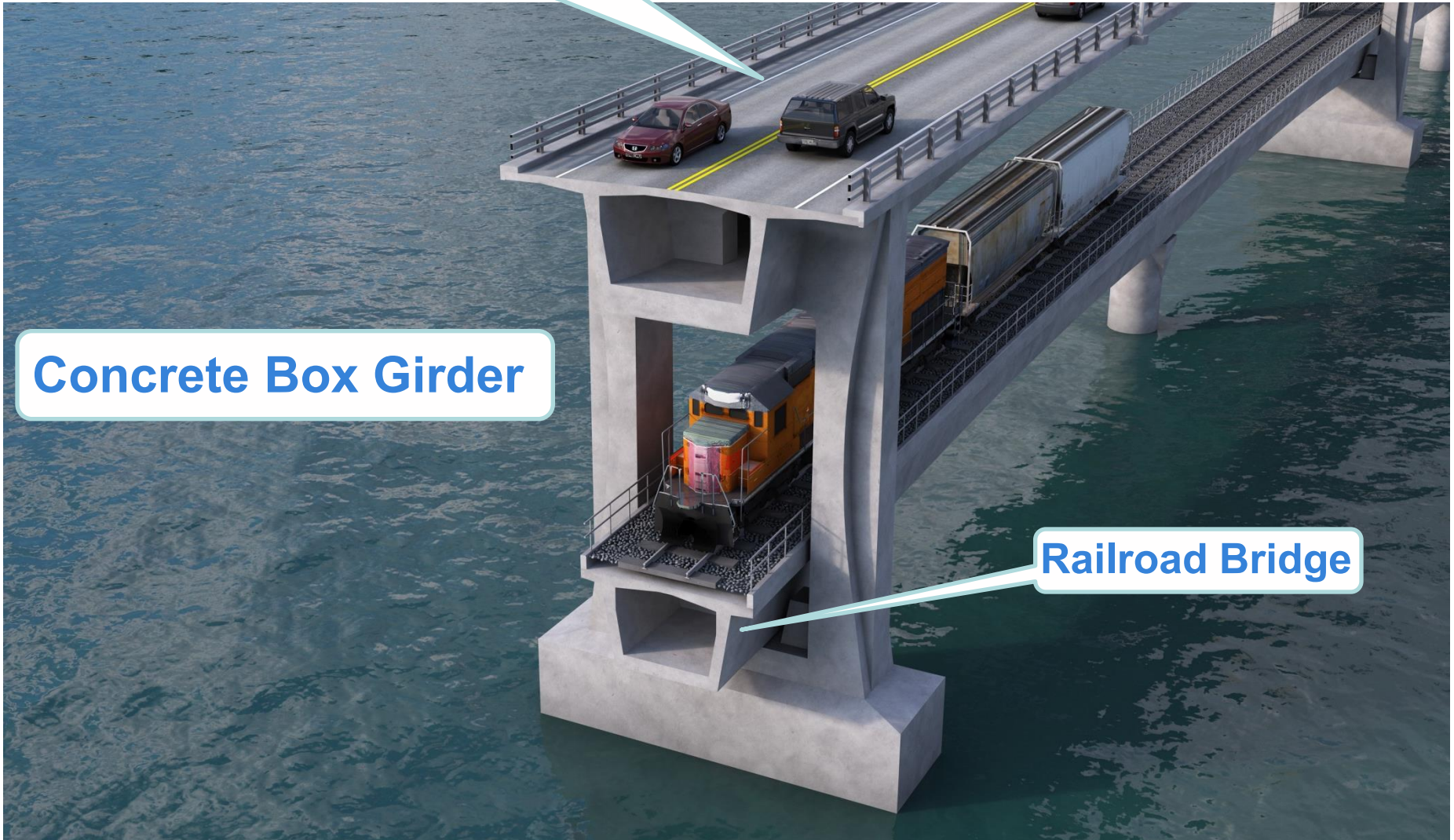


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Vehicular Bridge

Concrete Box Girder

Railroad Bridge

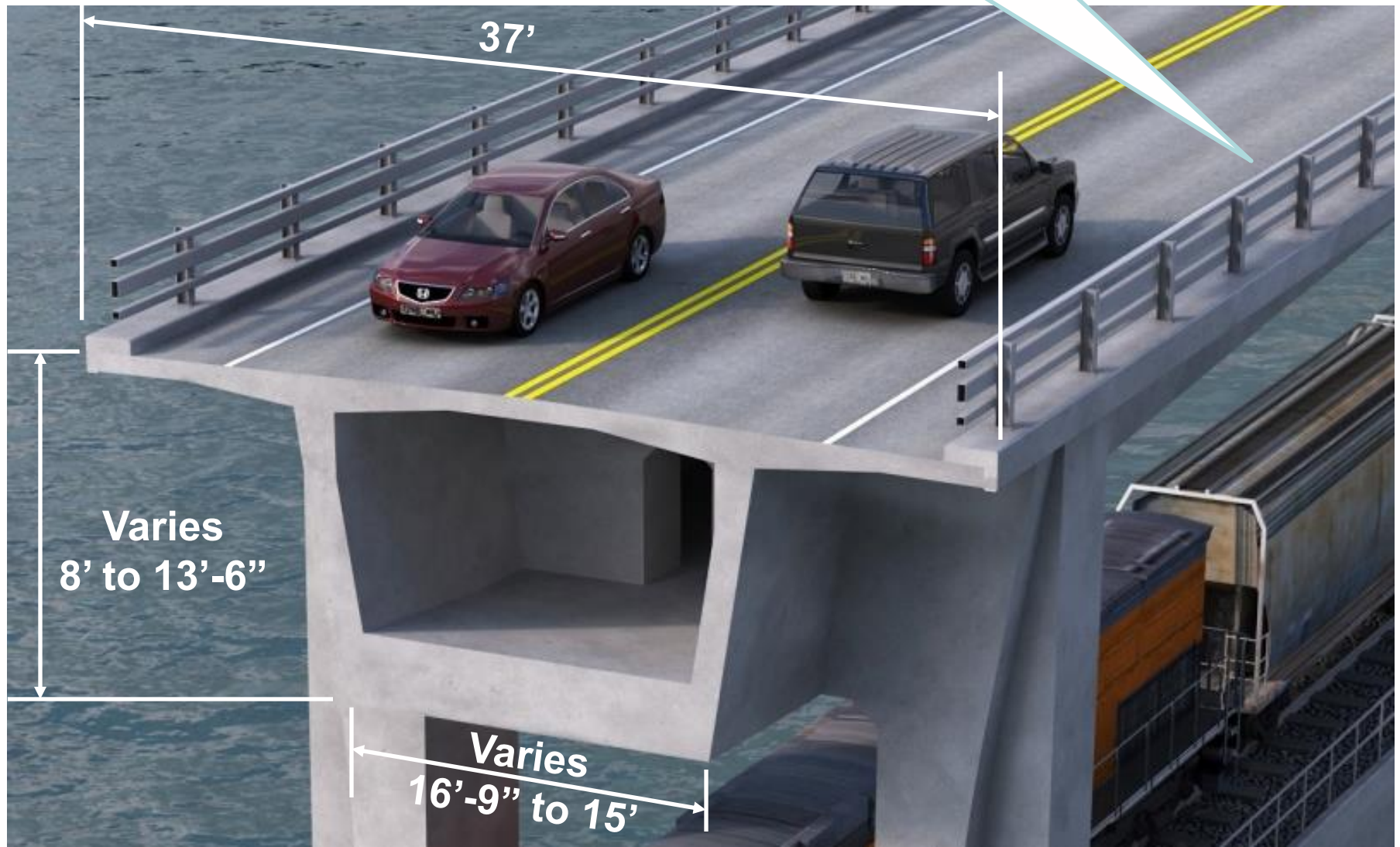




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Approach Vehicular Bridge Spans

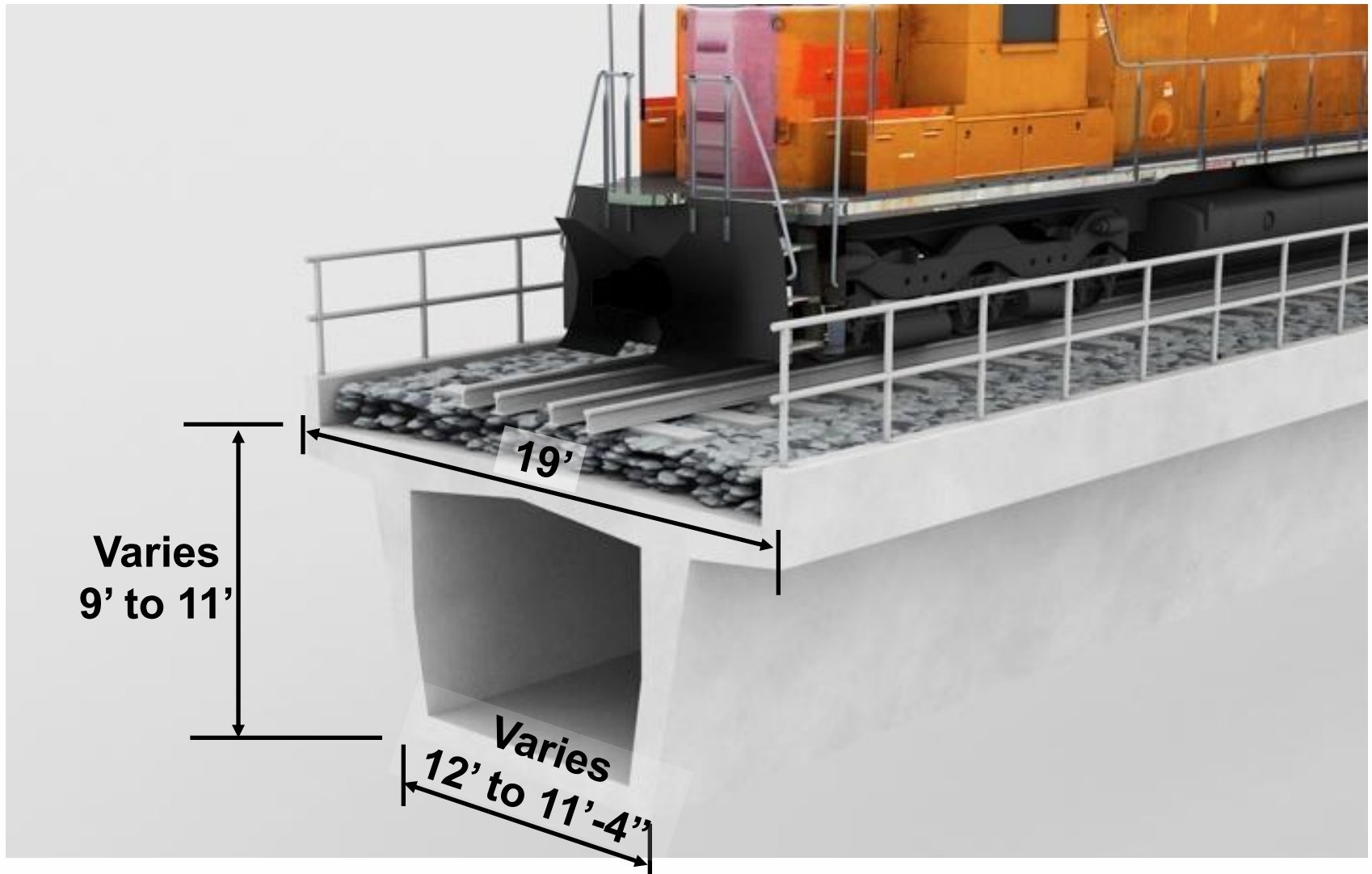
Open Vehicle/Bicycle Rail





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Approach Railroad Bridge Spans

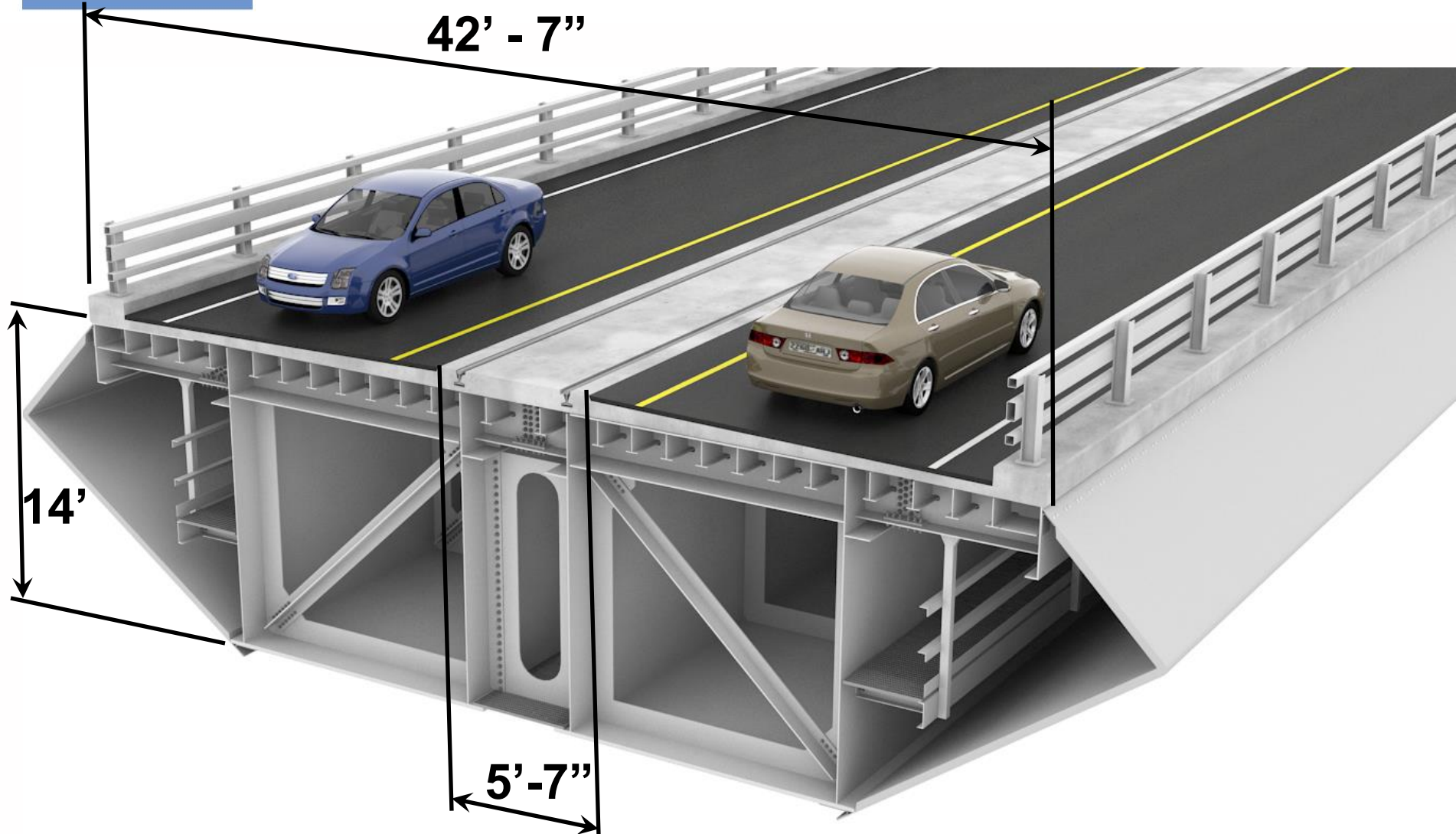




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Lift Span with Vehicles

Railroad Tracks on Deck of Lift Span





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Approach Bridge & Lift Span in Normal Vehicular Position

**Deck Width
Transition**

**Railroad Tracks
on Lift Span**

37' - 4"

5' - 7"

42' - 7"



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Design Workshop Community Input

- Selected Theme – Local Simplicity of the Working Waterway
- Selected Open Bridge Railing
- Selected Pier Shape
- Evolved Preferences for Tower Concepts & Bridge Lighting



Movable Bridge - View from Water

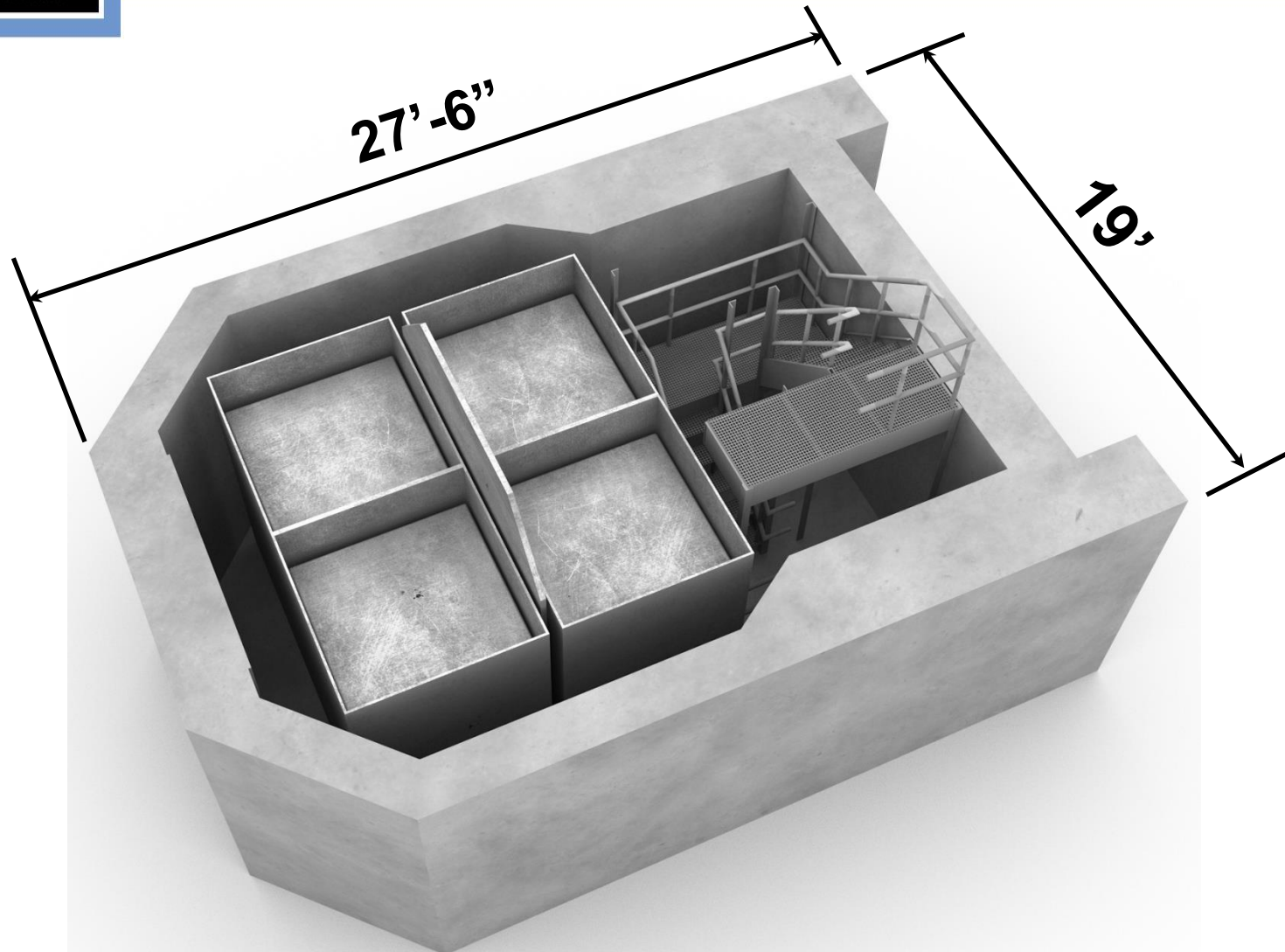
Shape Features Selected
with Community Input and Review





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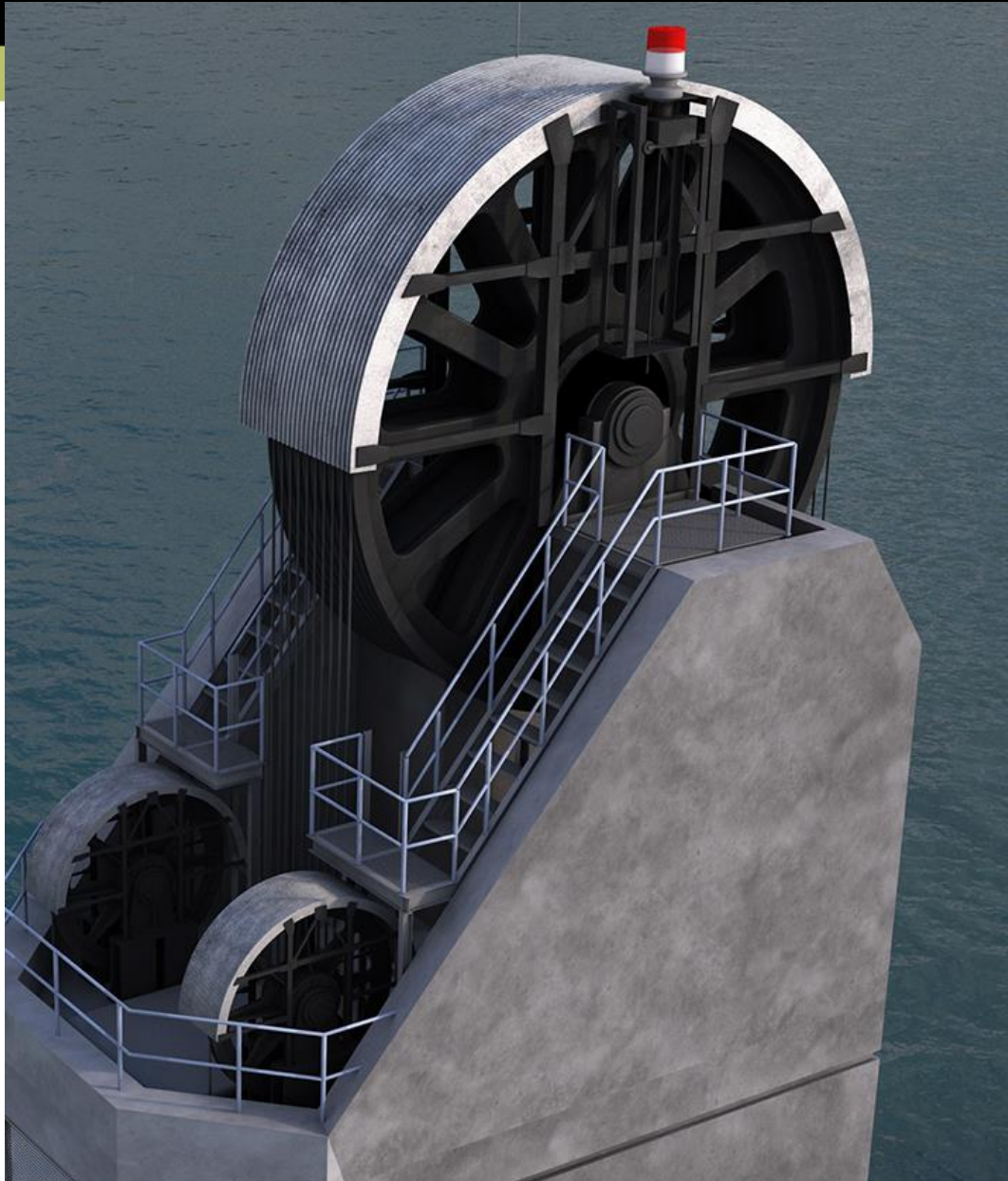
Lift Tower Cross Section Shape





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Lift Tower – Open Top with Sheave





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Lift Tower - Driver's Perspective Glass Panels on Face above Deck





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Bridge Lighting

Existing Sarah M Long Bridge

Existing
Roadway Lights



Existing SML
Bridge has
roadway lighting

NEW Bridge will
also have roadway
lighting using
current LED (Light
Emitting Diodes)
Technology

Tower Lighting on Sheaves & Behind Glass

Added as Budget Allows

Can vary intensity and color

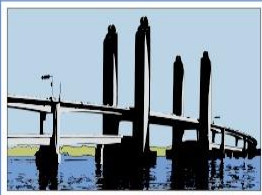
**Solid State LED (Light Emitting Diodes)
Energy Efficiency & Low Maintenance**



Tower Lighting on Sheaves & Behind Glass

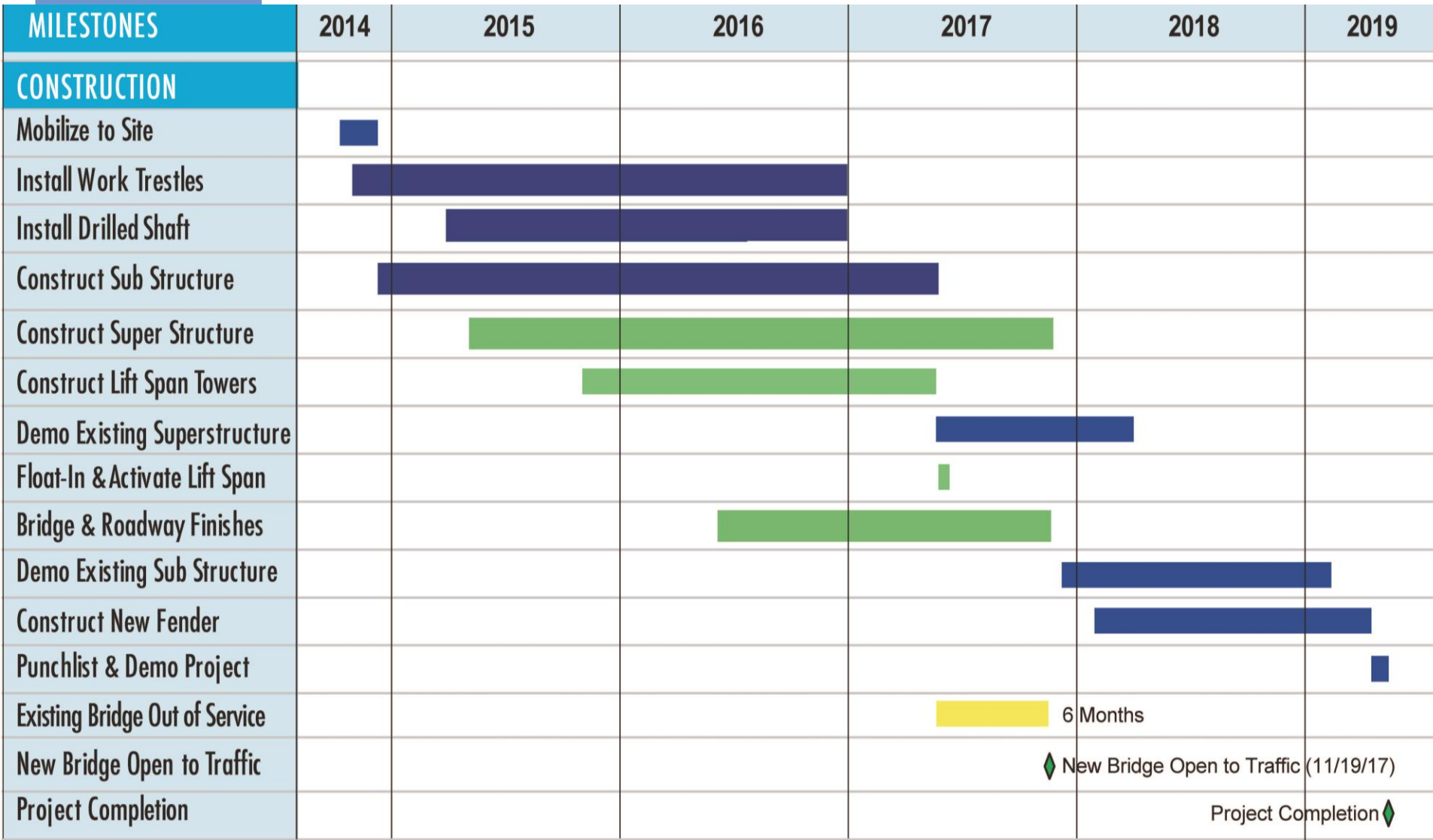
Can vary
intensity
and color





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DRAFT Construction Schedule





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State of
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U.S. Department of Transportation
**Federal Highway
Administration**

The Regional River Crossing

Linking Kittery, Maine & Portsmouth, New Hampshire

Schedule Goal:
Start Construction - Fall 2014
Open to Traffic – August 2017

THANK YOU

